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## **Introduction to Special Issue: Mobile technologies and inclusive development in Africa**

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This special issue is motivated by two challenges in policy and scholarly circles, notably, the: growing exclusive development in Africa and the relevance of mobile technologies in mitigating poverty and inequality. First, one of the greatest contemporary challenges to capitalism is exclusive development. The main cause of non-inclusive development today is a capitalist economic system which is structurally designed to encourage a small group of individuals to possess and control a vast majority of global wealth, thus leaving millions of people at the bottom of the wealth ladder (Tchamyou, 2018). To put this point into perspective, by 2016 the income of the Top 1% was estimated to exceed that of the Bottom 99% (Oxfam, 2015). Moreover, according to recent report by Oxfam, in 2017, 82% of the global wealth generated went to the wealthiest 1% of the global population while the bottom half which constitute about 3.7 billion people did not see any increase in their wealth (Oxfam, 2018).

The above global tragedy of exclusive development is particularly pronounced in Africa because according to a World Bank report on the transition from Millennium Development Goals (MDGs) to Sustainable Development Goals (SDGs), extreme poverty has been decreasing in all regions of the world with the exception of Africa where about half of countries in sub-Saharan Africa (SSA) were substantially off-course from achieving the MDG extreme poverty target (World Bank, 2015). The notion of exclusive development is relevant to the economic climate in SSA because the sub-region has been enjoying more than two decades of growth resurgence which began in the mid-1990s (Asongu & Kodila-Tedika, 2017). Moreover, the concepts of growth, inequality and poverty which can be used to further clarify the situation in Africa are connected in the perspective that the response of poverty to growth is a decreasing function of inequality (Asongu & Kodila-Tedika, 2018).

Second, the liberalisation of information and communication technology (ICT) sector over the past decade has substantially transformed the macroeconomic and microeconomic landscapes in developing countries, by providing among others: technical regimes, interactive

networks and services to underserved sectors such as health and finance (Murphy & Carmody, 2015; Asongu & Nwachukwu, 2018a). Within this framework, the mobile phone<sup>1</sup> revolution has been transforming households and industries, with *inter alia*: business solutions to Small and Medium Size Enterprises (SMEs); staff monitoring and consultation with medical doctors; interaction among businesses and banking services to previously neglected segments of the population (Asongu & Asongu, 2018). Accordingly, recent ICT literature for inclusive and sustainable development has documented the relevance of ICT for entrepreneurship and economic prosperity (Afutu-Koteyet *al.*, 2017); development of the banking sector (Kamel, 2015); improvement in living standards (Chavula, 2013); development of rural communities and reduction of the rural-urban divide (Klineret *al.*, 2013); welfare externalities (Carmody, 2013) and sustainable development (Bryne, 2011) in developing countries.

The specificity of Africa motivating this special issue is predicated on the fact that there is substantial room for ICT penetration in the continent, compared to more technically-developed economies in Europe, North America and Asia where the penetration of ICT has reached levels of saturation (Tchamyou, 2017; Asongu & Nwachukwu, 2016). In the light of the growing literature on the relevance of ICT in fostering inclusive development, it is argued that ICT penetration can be leveraged by policy makers in order to address the apparent policy syndrome of exclusive development. Moreover, on average, African countries are using ICT for mobile services more efficiently compared more technologically-advanced nations. For example as recently documented by Asongu and Nwachukwu (2018b), while Somalia has the lowest ICT penetration rate in the world, it is also one of the countries with the highest usage of the mobile phone for various purposes, including facilitation of financial services.

Against this backdrop, there have been growing calls for more scholarly research on the role of mobile phones in inclusive development (Mpogole *et al.*, 2008) and policy concerns have recently been raised that not enough systematic research has been done on the development outcomes of digital dividends, especially in developing countries (World Bank, 2016). In spite of the evolving literature on the role and relevance of mobile phone technologies in developing countries, we still know very little regarding the effects of mobile technologies on the development outcomes in Africa. There has been no prior special issue on the role of mobile phones in inclusive development in Africa, yet anecdotal evidence and few studies on the subject suggest a number of inclusive benefits from mobile phones such as

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<sup>1</sup> Throughout this introduction, the terms ‘mobile phones’, ‘cell phones’ and ‘mobile telephony’ are used interchangeably.

improving opportunities of doing business and household management efficiency among others (Aker and Mbiti, 2010). More importantly, given the pervasiveness of exclusive development policies and challenges associated with achieving inclusive development, it is time for an informed exposition on this important topic to help sub-African countries to break out from the shell of poverty.

The articles in this special issue have survived the journal's rigorous process of peer review and contributing authors are those who positively and constructively accommodated recommendations for many revisions to the original submissions. We would like to thank the editorial board of the Journal of African Business and the long list of anonymous referees for their constructive suggestions and criticisms. The individual contributions of articles in this special issue are stronger evidence of the hard work of these referees and editorial service. Each of the seven articles solidly stands on its merit. They can be summarized in four main strands as follows: agricultural productivity, access to finance; determinants of financial innovation and inclusion and, the nexus between mobile phone usage, financial inclusion and economic prosperity. The four strands are highlighted in chronological order.

In the first strand which is on agricultural productivity, Issahaku, Abu and Nkegbe are concerned with the issue of whether the use of mobile phones by smallholder maize farmers affects productivity in Ghana. The authors use propensity score matching procedure to show that mobile phone ownership and use significantly improves agricultural productivity. Within the same framework of agriculture, Minkoua Nzie, Bidogeza and Ngum investigate the effects of mobile phone use on transaction costs related to price, information search and conclude that farmers' use of mobile phones increases their transaction costs for carrots and tomatoes, unlike for cabbages.

The second strand focuses on the relationship between mobile phones and access to finance. Gosavi investigate whether mobile money enables firms to reduce issues of access to finance in Eastern SSA and conclude that, firms which use mobile money are more likely to obtain loans or lines of credit. Moreover, firms that use mobile money are more productive than other firms in the region. Bongomin, Ntayi, Munene and Malinga extend the analysis by investigating the moderating role of social networks in the nexus between mobile phone use and financial inclusion in rural Uganda. This findings show that while there is a direct effect between mobile money usage and financial inclusion, social networks also significantly moderate the underlying effect.

In the third strand which is on drivers and determinants of financial innovation and inclusion, Muthinja and Chipeta carried out an empirical study on firm- and macro-level

drivers of branchless banking in Kenya's commercial banking sector. The authors conclude that at the level of the firm, branchless banking is determined by agency cost, firm constraints, technological developments, transaction cost and firm size whereas at the macro level, globalisation and incompleteness in financial markets are important drivers. Hubani and Wiese complement this strand by examining what determines consumers' readiness to adopt mobile payment services. Their findings show that compatibility and convenience determine consumers' adoption while cost, risk and insecurity are deterrents. Moreover, gender moderates the nexus between convenience and the adoption of mobile payment services.

The last but not the least strand is a robust assessment of linkages between mobile telephony, financial inclusion and inclusive growth in Ghana by Abor, Amidu and Issahaku. The findings show that mobile phone penetration and financial inclusion considerably mitigate the probability of a household to become poor on the one hand and on the other hand, improve per capita household consumption of both food and non-food commodities. The results also reveal that the welfare rewards of financial inclusion and mobile telephony are not more apparent in female-controlled households.

It will be a recycle of evidence, if we devote more space to discussing policy implications of the articles, mechanisms by which the findings are relevant and conditions under which country- and regional-specific findings can be extended to the African continent and other developing countries. Such insights are easily accessible to the interested reader because a common denominator among articles featuring in this issue is that the empirical findings are succinctly summarised to improve accessibility and readability by interested readers who may need technical expertise and reading skills to grasp the rigorous empirical analyses and corresponding policy insights. In a nutshell, the issue is a rigorously selected set of easy-to-read and richly policy-relevant articles for both specialists and non-specialists.

#### Concluding Remarks:

The primary objective of this special issue is to showcase high-quality interdisciplinary research in the field of mobile phone technology and inclusive economic development, with a view to inspire and educate readers and policy makers on the vital role of mobile phones in economic development in Africa. We hope that the articles in this special issue will encourage academics and policy makers to carry out more research on the challenges and opportunities mobile phone technology offers in our quest to develop our communities.

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